

Serial Number 09/852,866

Art Unit 1742

Docket 2950RCE

In the Claims:

Please amend as follows:

1. (Currently Amended): A process for making metallized iron by reduction of iron oxide from green briquettes, said process consisting essentially of:
combining in a dry form iron-bearing materials forming a mixture that is iron bearing material substantially iron-oxide, a reductant, cellulose fiber, and 0% to 5% added water by weight of the mixture;
compacting the mixture into green briquettes;
direct feeding the green briquettes into a rotary hearth furnace; and
heating the green briquettes initially in an oxidizing atmosphere followed by further heating in an inert or reducing atmosphere at a temperature from about 1000°C to about 1550°C for a period of 6 to 20 minutes, therein metallizing iron forming metallized briquettes.
2. (Canceled)
3. (Canceled)
4. (Previously Presented): The process according to claim 1, wherein said iron bearing materials are selected from the group consisting of iron ore, blast furnace dust, blast furnace sludge, basic oxygen furnace dust, EAF dust, basic oxygen furnace sludge, mill scale, pellet fines, metallized DRI fines, turnings, mill sludge, sinter dust, cupola dust, and mixtures thereof.
5. (Previously Presented): The process according to claim 1, wherein said cellulose fiber is selected from the group consisting of shredded organic wastes, paper, newsprint, cardboard,

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wood scrap, bagasse (sugar cane waste), sewage sludge, municipal waste, refuse-derived fuels, and mixtures thereof.

6. (Currently Amended): The process according to claim 1, wherein said reductant is selected from the group consisting of CDQ dust, pulverized coal, coke-breeze, petroleum coke fines, charcoal, graphite, and any other reductants commonly used in the direct reduction of iron.

7. (Canceled)

8. (Currently Amended): A process for making metallized iron by reduction of iron oxide from green briquettes, said process consisting essentially of:

combining in a dry form materials forming a mixture that is iron bearing material, a reductant, cellulose fiber, steel alloy materials, and 0% to 5% water by weight of the mixture;
compacting the mixture into green briquettes;
direct feeding the green briquettes into a rotary hearth furnace; and
heating the green briquettes initially in an oxidizing atmosphere followed by further heating in an inert or reducing atmosphere at a temperature from about 1000°C to about 1550°C for a period of 6 to 20 minutes, therein metallizing iron forming metallized briquettes.
The process according to claim 1, further comprising adding steel alloy materials to the agglomerate; and introducing said green briquette into a steelmaking furnace.

9. (Currently Amended): The process according to claim 1, wherein said green briquette is composed of sufficient reductant to reduce the iron oxide to iron forming the metallized briquette.

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10. (Previously Presented): The process according to claim 1, wherein from 0.5 to 15 percent of the iron bearing feed material has a particle size of up to 6 mm in size.
11. (Canceled)
12. (Previously Presented): The process according to claim 1, wherein said cellulose fiber comprises 0.5 to 2.0% by weight of the green briquette.
13. (Previously Presented): The process according to claim 1, wherein said metallized briquette forms at least 40% metallized iron.
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)